

PATENT OF INVENTION

**SYSTEM, ESPECIALLY FOR A MOTOR VEHICLE, ABLE TO START  
AN INTERNAL-COMBUSTION ENGINE AND CHARGE AN ELECTRICAL  
CIRCUIT**

Applicant: VALEO EQUIPEMENTS ELECTRIQUES MOTEUR

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**ABSTRACT**

System, especially for a motor vehicle, able, on the one hand, to start up an internal-combustion engine and, on the other hand, to charge an electrical circuit, including a main electrical machine able to operate, on the one hand, as a generator and, on the other hand, as an electric motor, the said electrical machine driving the internal-combustion engine by means of a belt when it is operating in motor mode, the system further including management means which drive the main electrical machine, characterised in that it includes a supplementary starter, as well as means for detecting at least one condition for triggering the activation of the said supplementary starter, and the management means drive the main electrical machine and the starter, according to a particular sequence, when the said condition is detected by the said detection means.

FIGURE 1

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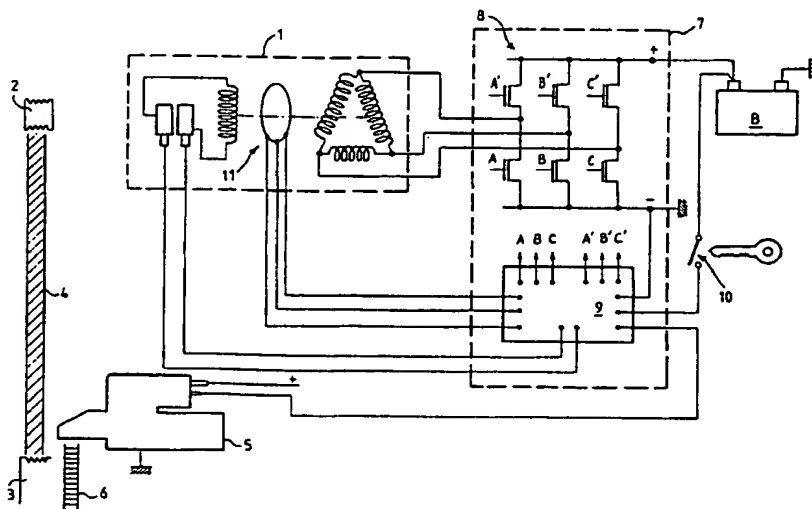
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[Suite sur la page suivante]

(54) Title: SYSTEM, IN PARTICULAR FOR MOTOR VEHICLE FOR STARTING A HEAT ENGINE AND FOR CHARGING  
AN ELECTRIC CIRCUIT

(54) Titre: SYSTEME, NOTAMMENT POUR VEHICULE AUTOMOBILE APTE A ASSURER LE DEMARRAGE D'UN MO-  
TEUR THERMIQUE ET LA MISE EN CHARGE D'UN CIRCUIT ELECTRIQUE



(57) Abstract: The invention concerns a system for motor vehicles, for starting a heat engine and charging an electric circuit, comprising a main electric machine (1) operating as a generator and as an electric motor, said electric machine powering the heat engine by means of a belt (4) when operating in engine mode, the system further including managing means (7) which control the main electric machine. The invention is characterised in that it comprises a complementary starter (5), and means (9) for sensing at least a condition triggering the activation of said complementary starter and the managing means control the main electric machine and the starter according to a specific condition when said condition is detected by said sensing means.

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